

FIG. 1

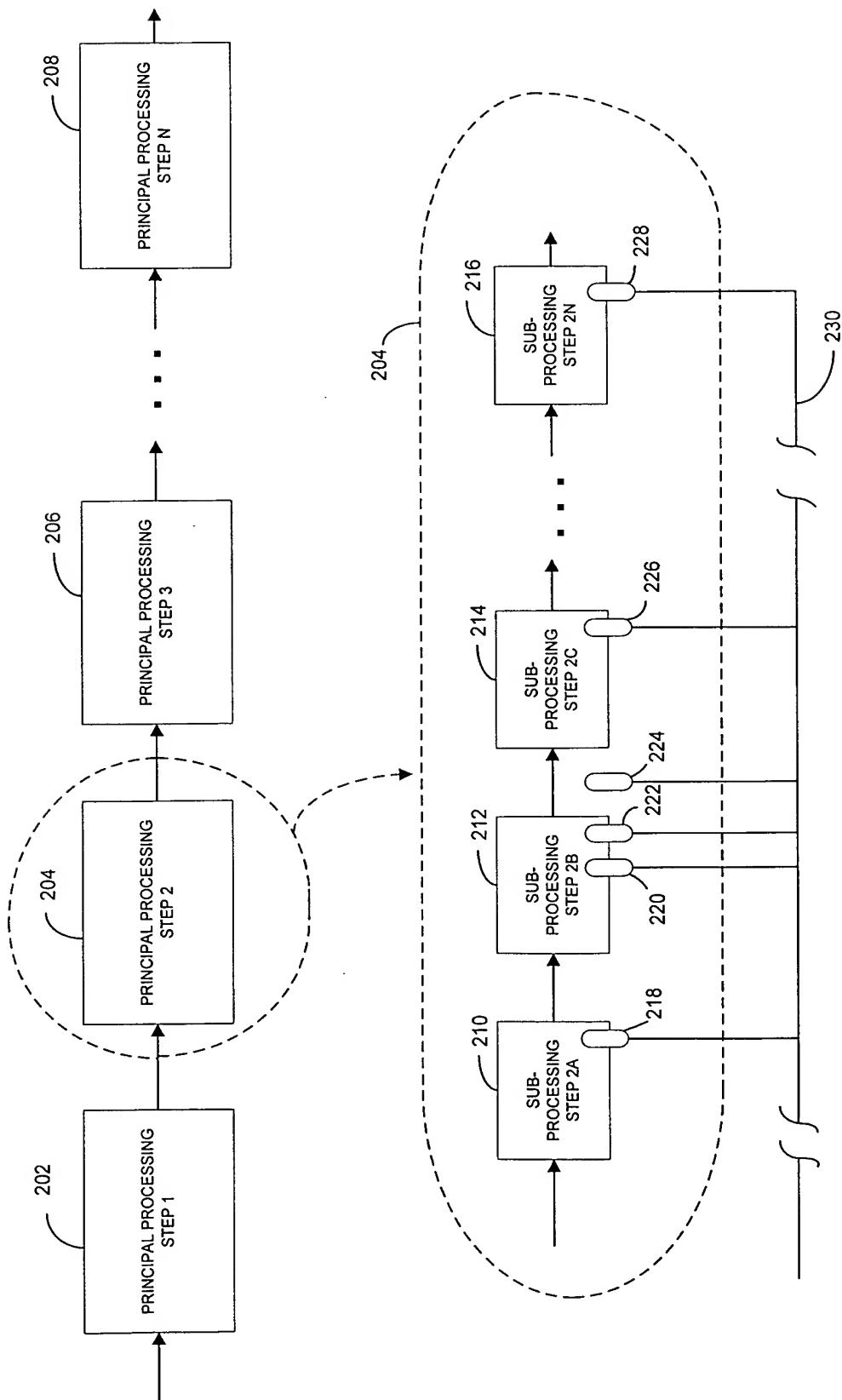


FIG. 2

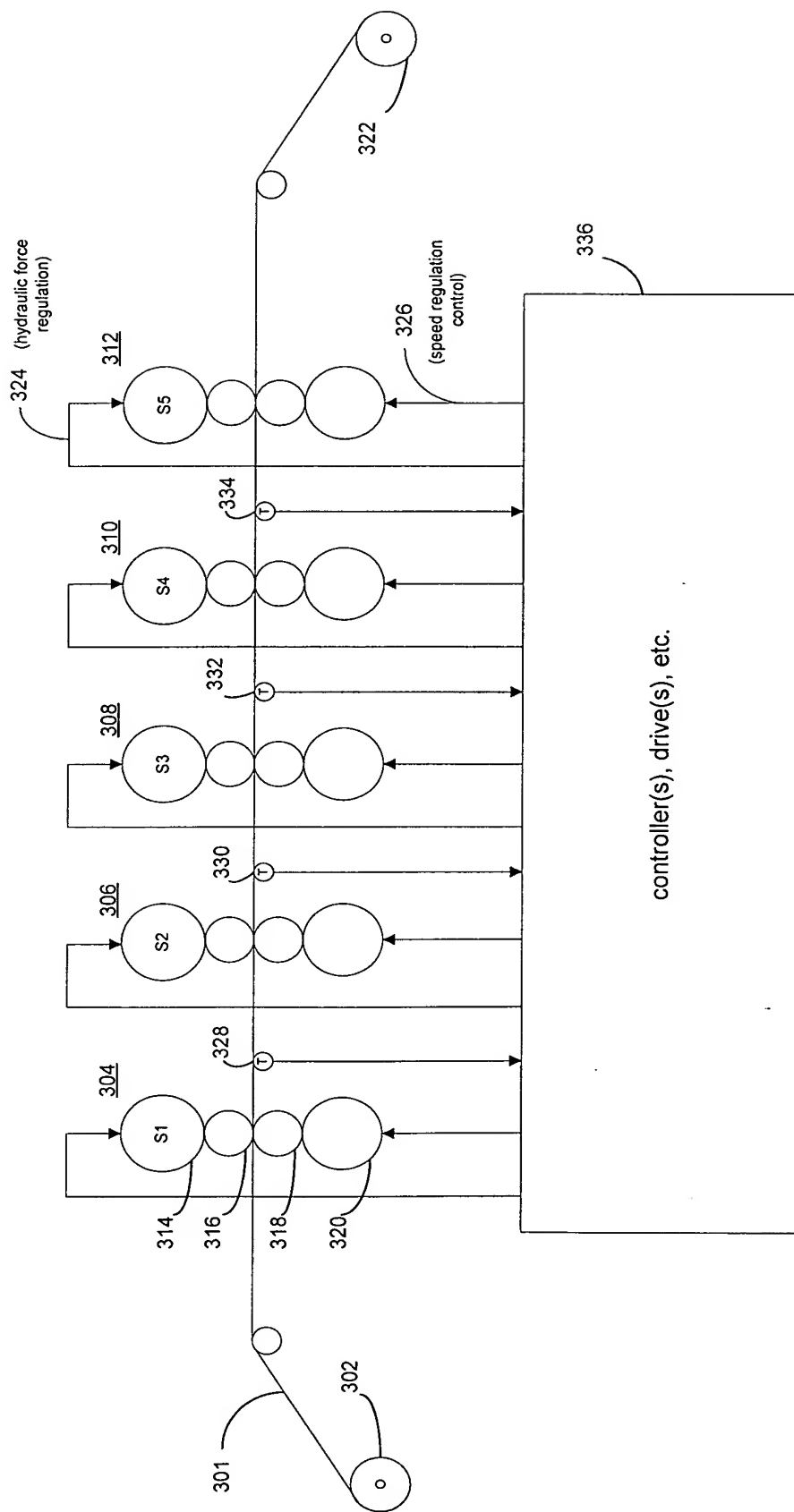
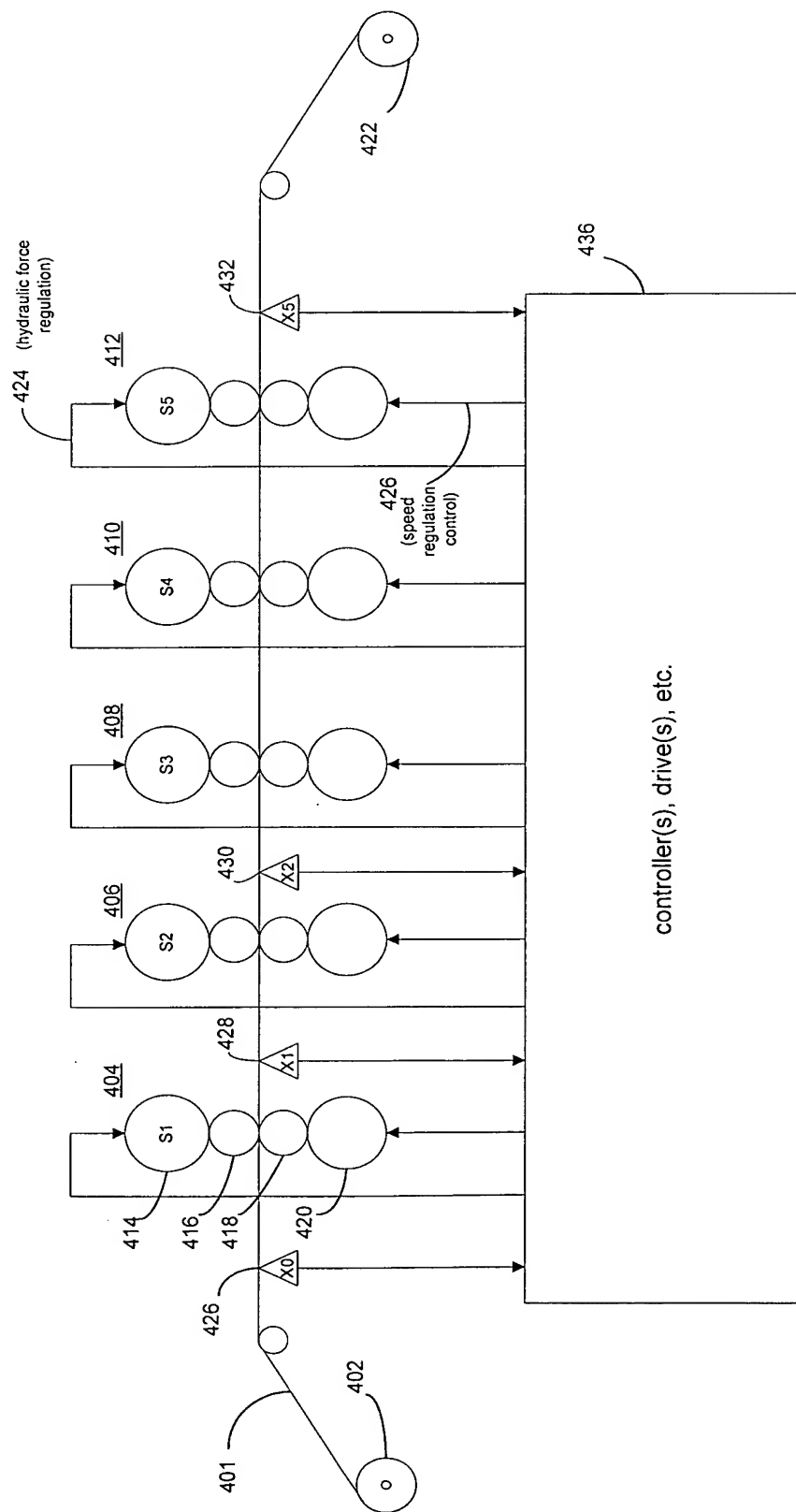


FIG. 3



**FIG. 4**

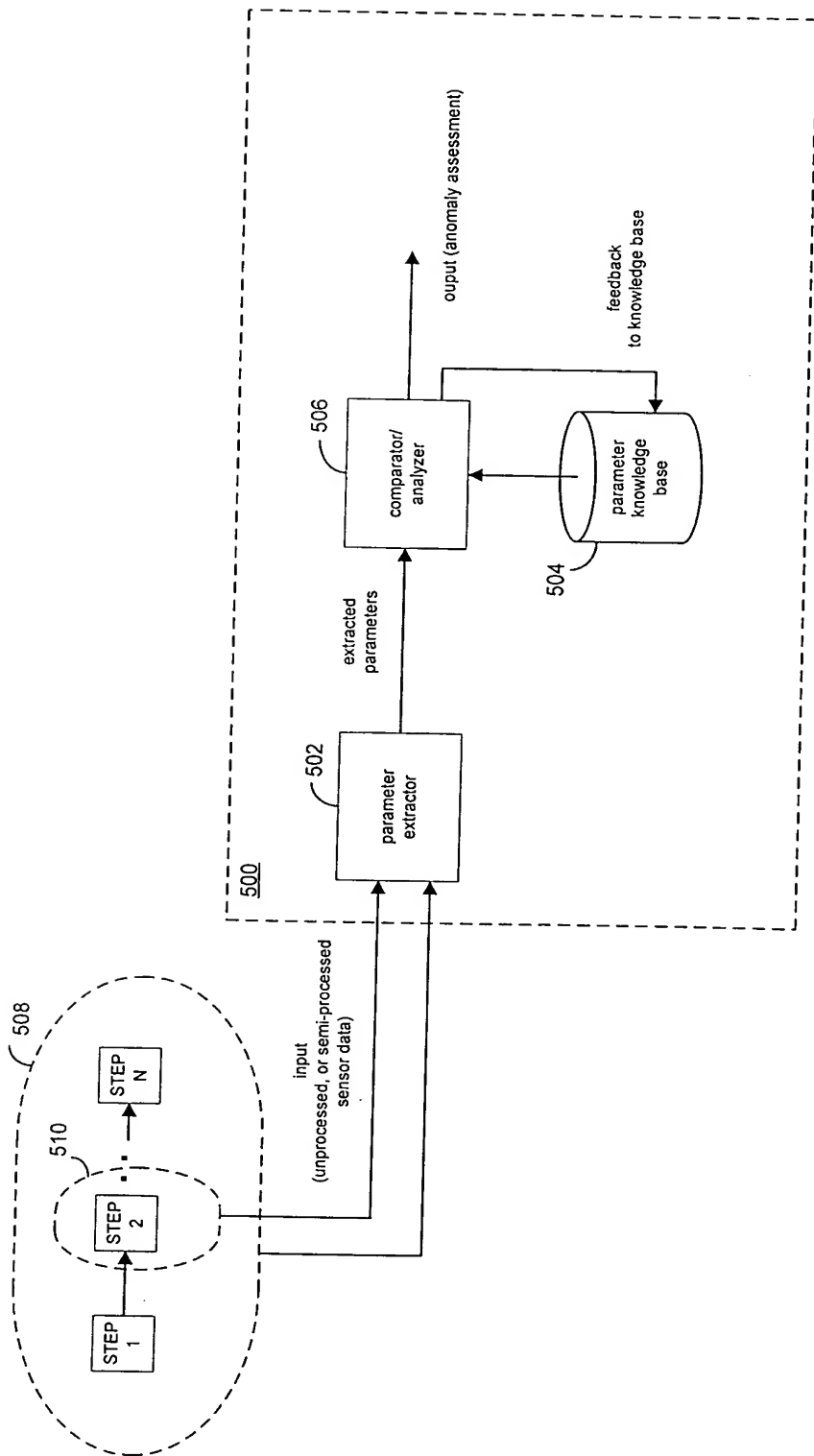


FIG. 5

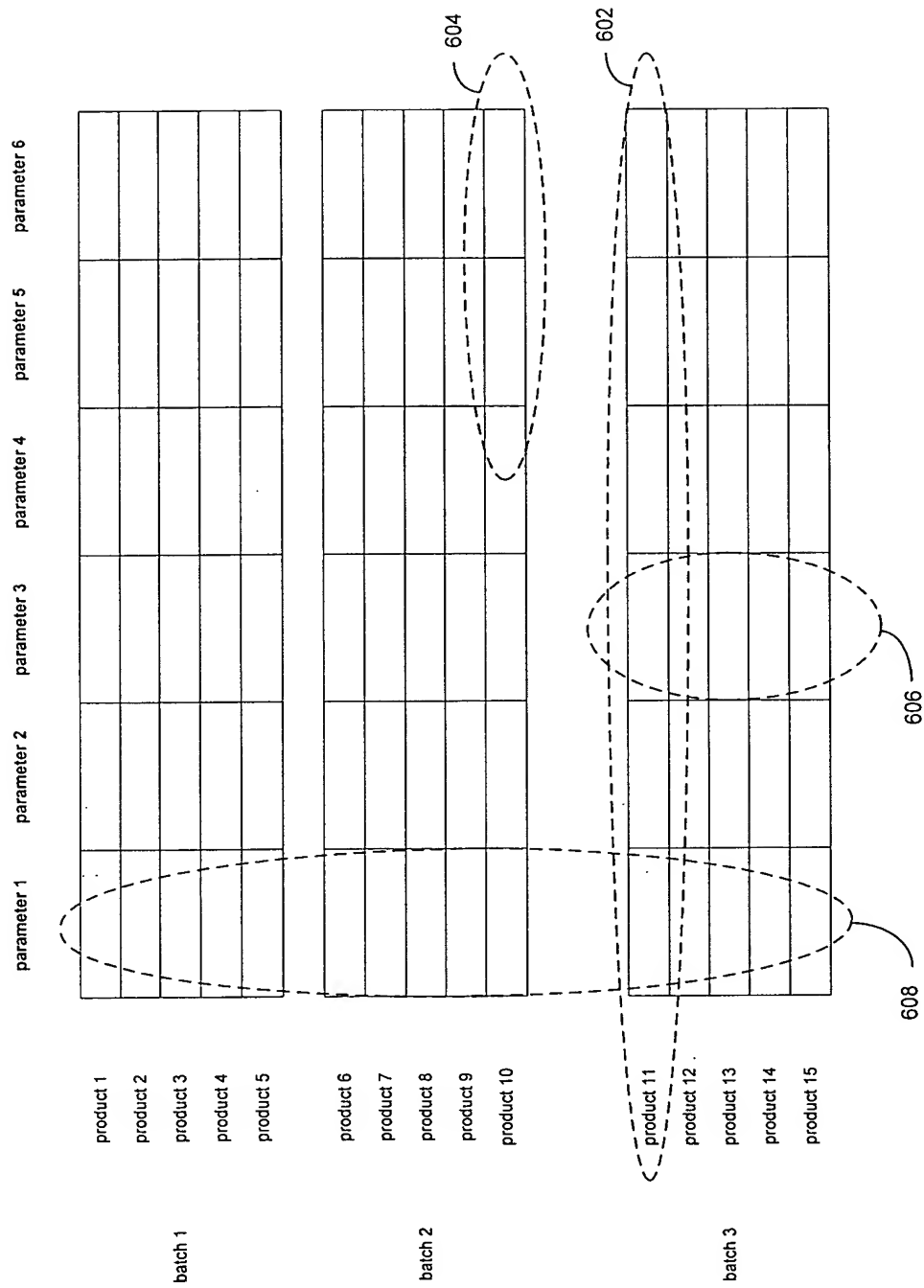


FIG. 6

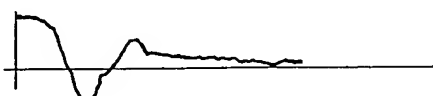
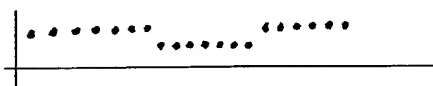
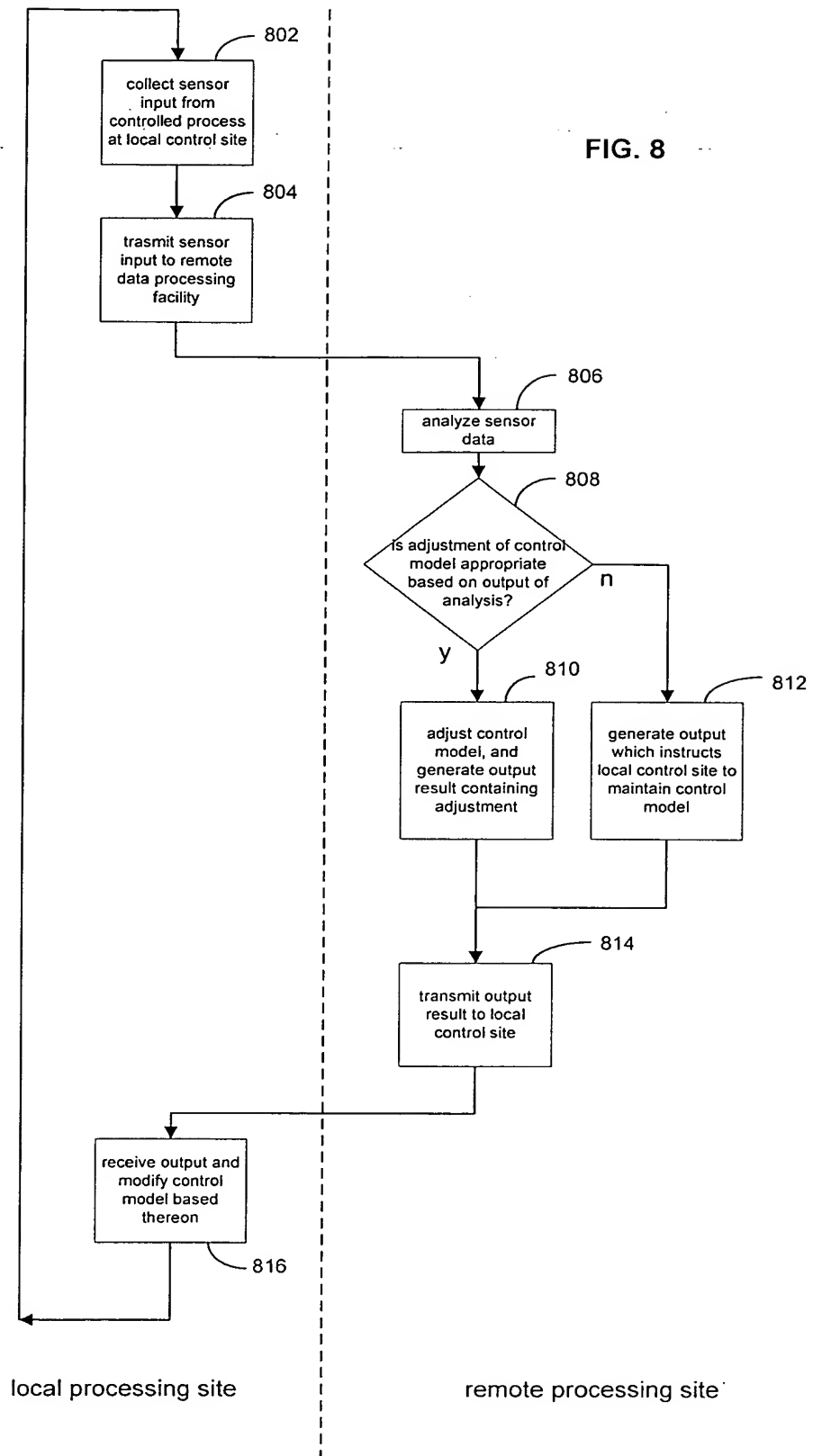
anomaly index and descriptor	sensor(s)	characteristic shape	diagnoses
1 heads swing very light	X5, X1		- control sytem running below optimal level
2 bad setup, excessive forces	model feedback forces		- model grades mismapped

FIG. 7

FIG. 8



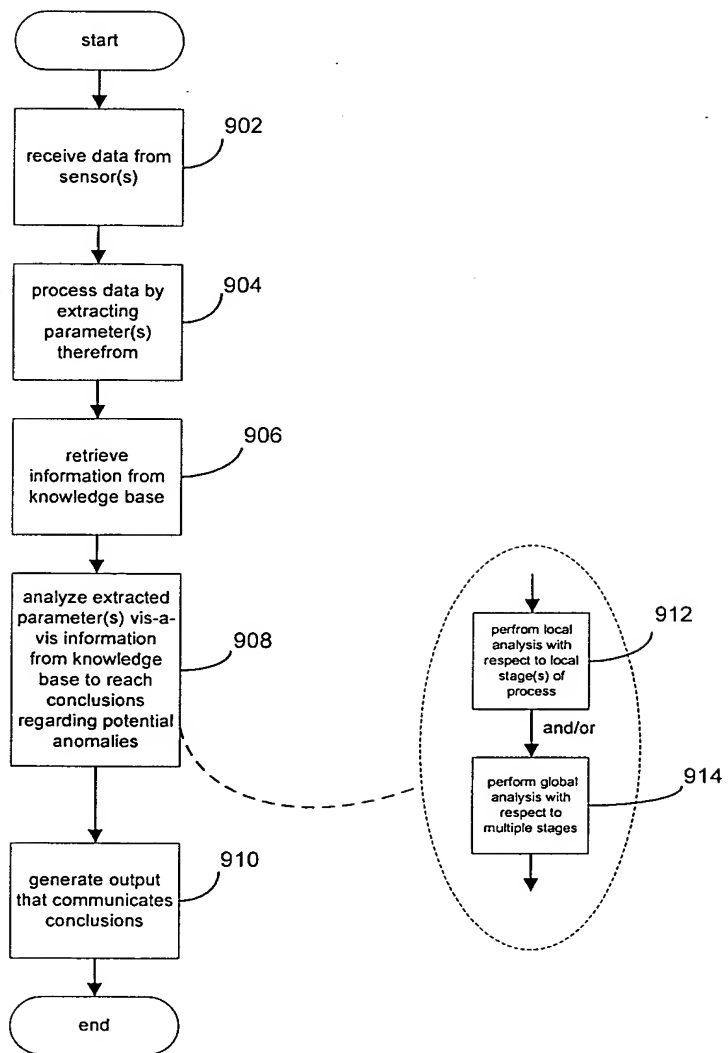


FIG. 9